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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,956	08/08/2001	Dana Simonson	550.199US1	2011
21186	7590	12/12/2005	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH 1600 TCF TOWER 121 SOUTH EIGHT STREET MINNEAPOLIS, MN 55402			PHAN, TRI H	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/924,956		SIMONSON ET AL.	
	Examiner		Art Unit	
	Tri H. Phan		2661.	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-38 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 7 and 16 is/are allowed.
- 6) ☐ Claim(s) 1-4,6,8-15, and 17-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 08 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on August 5th, 2005.
Claim 5 is now canceled. Claims 1-4 and 6-38 are now pending in the application.

Information Disclosure Statement

2. The information disclosure statement and the 1449 form filed March 19th, 2002 are not received by the Office; therefore, the information referred to therein has not been considered.

Drawings

3. This application has been filed with informal drawings (Figures 1 and 23) which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6, 8-15 and 17-38 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaughnessy et al.** (U.S.6,141,347; hereinafter refer as '**Shaughnessy**') in view of **Maher et al.** (U.S.6,647,020; hereinafter refer as '**Maher**').

- In regard to claims 1 and 22, Shaughnessy discloses about the software program of claim 22 (col. 2, lines 11-13) and method of claim 1 implementing the program instructions (for example see fig. 2). The method comprising receiving a digital message from a communication source coupled to a network (col. 6, lines 38-39 (the site receives a message from a subscriber unit) illustrated in step 601); selecting a multicast address from a plurality of addresses based on a communication group identification number received from the communication source (col. 6, lines 49-51, the site determines (selecting a corresponding group identification mapping with the multicast address within the controller database disclosed in figures 2-3; col. 2, lines 53-58) illustrated in step 602), the communication group identification number including two or more members (Fig. 1, (shown under TG ID are groups A, C, D, and G; also, under group D, there are subscribers 211, 212, 213); and wherein the talk group also referred to as 'NAC' (see applicant's specification page 18, lines 5-7)); communicating a routing signal based on the selected multicast address to selected elements of the network (col. 7, lines 26-31); and distributing the digital

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message to the members using the selected elements based on the routing signal (col. 7, lines 31-35).

However, Shaughnessy explicitly lacks what Maher discloses, the communication group identification number including a network access code 'NAC' (figure 6; col. 11, lines 36-52 where different zones have different control multicast address, e.g. "NAC", for the same talk group, e.g. "*communication group identification number*", for setting up of a multi-zone talk group call process as disclosed in figure 8).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the control multicast address for the purpose of setting up of a multi-zone talk group call. The motivation for using the control multicast address is for implementing talkgroup calls in multiple-zone system architectures as disclosed in Maher: col. 3, lines 55-57.

- Regarding claims 2-3, Shaughnessy further teaches, wherein receiving a digital message from a two way radio (figures 2-3; the subscriber unit is a two way radio, so it receives messages from a two way radio, see col. 4, lines 44-47) and wherein receiving a digital message from a computer coupled to an audio transducer (wherein the "*transducer*" is obvious in the subscriber unit (processor in figure 3) and the controller (processor in figure 4) in order to convert voice or data for transmitting to/from the talk group as disclosed in col. 6, lines 24-28 in the communication system 200 of figure 2). It should also noted that Maher also discloses about the transcoding services in converting between different format of different networks ("*transducer*"; col. 5, lines 25-45).

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- In regard to claim 4, Shaughnessy further teaches, wherein selecting a multicast address includes mathematically mapping the communication group identification number to the multicast address (implicitly taught because a processor in a server is programmed to map a communication group identification number to the multicast address accordingly as disclosed in figures 2-3).

- Regarding claim 6, Shaughnessy further teaches, wherein selecting a multicast address from a plurality of addresses based on a communication group identification number received from the communication source includes selecting a multicast address from a plurality of addresses based on a network access code 'NAC' or system ID, also referred to as the talk group (see applicant's specification page 18, lines 5-7) number received from the communication source (col. 2, lines 56-57 and col. 2, lines 60-64 (the site maintains mapping multicast address to talk groups for selecting purposes)).

However, Shaughnessy explicitly lacks what Maher discloses, selecting a multicast address from a plurality of addresses based on a *system identification number* received from the communication source (figure 6; col. 11, lines 36-52 where different zones have different control multicast address, e.g. "*system identification number*", for the talk groups, e.g. "*communication group identification number*", in setting up of a multi-zone talk group call process as disclosed in figure 8).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the *system identification number* for the purpose of setting up of a multi-zone talk group

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call. The motivation for using the control multicast address is for implementing talkgroup calls in multiple-zone system architectures as disclosed in Maher: col. 3, lines 55-57.

- In regard to claims 8 and 9, Shaughnessy further teaches, wherein selecting a multicast address includes accessing a registry of members or talk groups (figure 2 at site 208 shows a list of members in a talk group and each talk group, for example TG ID D, includes a list of members that includes 212, 250, 213...).

- Regarding claim 10, Shaughnessy further teaches, wherein accessing a registry of members includes accessing a registry of network access codes 'NACs' (figure 2 at site 208 shows a talk group ID, for example TG ID D includes a List of members that include 212, 250, 213. . .; where the talk group also referred to as network access code 'NAC' or system ID, see applicant's specification page 18, lines 5-7).

- In regard to claims 11 and 12, Shaughnessy further teaches, that accessing a registry of members (as in claim 12) includes accessing a registry of unit identifiers corresponding to subscribers (col.3, lines 12-21, a plurality of subscriber units (accessing talk group A gives access to identified units 214 and 215 as shown with the talk group identification, e.g. "*registry of group numbers*" as in claim 11, see col. 5, lines 41-48) shows at site 208 '*registry of sites*' in figure 2, when the subscriber unit registers when roaming or handover, e.g. VLRs, and the "*registry of home channels*" is just the registry where the subscriber unit belongs to, e.g. HLRs, as disclosed in col. 1, lines 40-47; which is maintained at each sites (col. 2, lines 56-58).

- Regarding claim 13, Shaughnessy further teaches that accessing a registry of members includes accessing a registry of call guards of a communication system (col. 5, lines 42-59, (call guards function to identify a member of a group, so whenever a subscriber joins a site request, an affiliation message allows a site to identify the subscriber to that talk group to which he belongs)).

- In regard to claims 14 and 23, Shaughnessy further teaches, wherein further including receiving a request from a communication receiver to register with the selected multicast address (col.5, lines 41-48, (where site controller receives a request from a subscriber, for affiliation)).

- Regarding claims 15, 19 and 24, Shaughnessy further teaches, wherein distributing the digital message includes encoding using real time transport protocol 'RTP' (col. 6, lines 23-25 (voice conversation between talk groups is in real time) where the "*RTP protocol*" is used for transporting real time data in Internet Protocol network). It should also note that Maher also discloses where the call is for audio, video, multimedia, etc. ("*real time*"; col. 8, lines 31-33).

- In regard to claims 17 and 18, Shaughnessy further teaches, wherein distributing the digital message includes distributing a packet using Internet protocol 'IP' (col. 3, lines 45-47) and distributing control messaging (where the IGMP is used for forwarding information between routers across the network as disclosed in col. 3, lines 58-65). It should also note that Maher also

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discloses about the use of IGMP message as control messages (for example see col. 4, line 63 through col. 5, line 4).

- Regarding claims 20-21, Shaughnessy does disclose about using protocols and software program for implementing into the system (for example see col. 2, line 11-13; col. 8, lines 16-19), but fails to explicitly disclose about “SOAP” or “XML”. However, SOAP and XML are well known in the art and wherein using different types of protocols or software program codes are system engineering choices. Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use the SOAP or XML as for the system engineering choice.

- In regard to claims 25 and 36, Maher teaches a system comprising a plurality of transceivers (Fig. 1, repeaters 122-126); a plurality of routers wherein each transceiver is coupled to at least one router of the plurality of routers (Fig. 1, router 108, and router 110); a digital communication network (Fig. 1 @ 100) coupled to the plurality of routers (Fig. 1 shows router 108, 110, 112 and 114 coupled together to make up network 100); and one or more computers (Fig. 1, zone controller 116) coupled to the digital communication network wherein the one or more computers are adapted to distribute a control packet to a subset of the plurality of routers based on a wide area call inactivity and selected as a function of a group identification number received from the plurality of transceivers (col. 7, lines 30-46 wherein the “*distribution is based on the wide area call inactivity*” is where the communication device is deaffiliated with the talk group through the deaffiliation message, e.g. leave message, as disclosed in figure 2B). Maher

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further disclose about the connection setup for the wireless subscriber unit to the talk group (see figures 1 and 2A), where the zone controller dynamically assigns and manages/controls the connection setup based on the type of payload of the call such as voice, data, video, etc. (for example see col. 5, line 66 through col. 6, line 23; col. 8, lines 28-33), e.g. “*distribution is based on a virtual circuit fiber*”, wherein it is obvious that ‘voice’ has higher priority than data, e.g. “*based on priority*”.

However, Maher does not explicitly disclose what Shaughnessy teaches, means for mapping a communication identification number to a multicast address (for example see figures 2-3; col. 2, lines 53-58 where the sites are logically arranged into talk groups and where the processor does the mappings of talk group identifications to multicast address as disclosed in col. 4, lines 47-56).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the “*means for mapping*” at each site. The motivation for including “means for mapping” at each site is for implementing the mapping dynamically, scalability through the system as disclosed in Shaughnessy: col. 9, lines 7-10.

- Regarding claims 26 and 27, Maher further teaches, wherein a transceiver of the plurality of transceivers includes a computer console (Fig. 1 and 6, console site 106 with computers 138, 140) the plurality of transceivers includes a computer console (col. 4, lines 44-47 and col. 7, lines 30-46); a telephony gateway (col. 4, lines 48-57 and col. 5, lines 34-45).

- In regard to claims 28-30, Maher further teaches, wherein the digital communication network includes a private network (Fig. 1, remote site 102); an Ethernet network (col. 4, line 22); the Internet (IP multicasting implies the network includes Internet).

- Regarding claims 31 and 37-38, Maher further discloses, wherein a router of the plurality of routers includes a look up table, as claimed in claim 31 (col. 9, lines 54-56). However, Maher does not explicitly disclose what Shaughnessy teaches, means for mapping includes a processor adapted for dynamic mapping, as claimed in claims 37-38 (for example see figures 2-3; col. 2, lines 53-58 where the sites are logically arranged into talk groups and where the processor does the mappings of talk group identifications to multicast address as disclosed in col. 4, lines 47-56).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the “*means for mapping*” at each site. The motivation for including “means for mapping” at each site is for implementing the mapping dynamically, scalability through the system as disclosed in Shaughnessy: col. 9, lines 7-10.

- In regard to claim 32, Shaughnessy discloses, a method comprising receiving a message from a caller on a network, the message including a group identification code (col. 6, lines 56-58 (the site receives a message from a subscriber unit) illustrated in Fig. 6 step 607), the group identification number including a network access code ‘NAC’ (Fig. 1, (shown under TG ID are groups A, C, D, and G; also, under group D, there are subscribers 211, 212, 213); and wherein the talk group also referred to as ‘NAC’ (see applicant's specification page 18, lines 5-7));

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receiving a registration request from one or more receivers on the network (col. 6, lines 38-39, the site receives an affiliation message (a registration request) illustrated in Fig. 6 step 601); mapping the group identification code to a multicast address (col. 7, lines 5-9, illustrated in Fig. 6 step 602); transmitting a signal to a plurality of stations on the network, the plurality of stations selected as a function of the multicast address, the signal adapted to configure the network to direct the message to the one or more receivers (col. 7, lines 17-21, once the proper multicast address has been identified, the site transmits a message (transmits a signal) illustrated in Fig. 6 step 604). However, Shaughnessy lacks what Maher discloses, the communication group identification number including a network access code 'NAC' (figure 6; col. 11, lines 36-52 where different zones have different control multicast address, e.g. "NAC", for the same talk group, e.g. "*group identification number including a network access node*", for setting up of a multi-zone talk group call process as disclosed in figure 8).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the control multicast address for the purpose of setting up of a multi-zone talk group call. The motivation for using the control multicast address is for implementing talk group calls in multiple-zone system architectures as disclosed in Maher: col. 3, lines 55-57.

- Regarding claims 33-34, Shaughnessy further disclose, wherein mapping includes accessing a table, dynamically establishing a virtual circuit (Fig. 2, site controller accessing table 225; where the sites are logically arranged into talk groups and mappings of talk group identifications to multicast address as disclosed in col. 2, lines 53-58; col. 2, lines 12-21; and where in figure 2, a virtual circuit between site 208 and subscriber 214 (a virtual circuit that

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appears to a subscriber as a point-to-point link, and disconnects when the call is over)), e.g.

“*virtual circuit*”),).

- In regard to claim 35, Shaughnessy further teaches, wherein receiving a message includes receiving a packet of digital data encoded in an Internet protocol (IP)(IP multicast packet is encoded in an Internet protocol).

Response to Amendment/Arguments

7. Applicant's arguments filed on August 5th, 2005 with respect to amended claims 1, 22, 25, 32 and 36 have been considered but are moot in view of the new ground(s) of rejection.

Claims 2-6, 8-15, 17-21, 23-24, 26-31, 33-35, and 37-38 are rejected as in Part 6 above of this Office action and by virtue of their dependence from claims 1, 22, 25, 32 and 36.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lakey et al. (U.S.6,078,954), **Gang, Jr. Joseph Mark** (U.S.5,696,763) and **Dertz et al.** (U.S.2002/0093948) are all cited to show devices and methods for improving the packet-based communications system in the telecommunication architectures, which are considered pertinent to the claimed invention.

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9. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300

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Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan
December 7, 2005



BRIAN NGUYEN
PRIMARY EXAMINER